

WHAT IS CLAIMED IS:

1. In a method of improving the aperture ratio or resolution of an OLED device which includes a plurality of laterally spaced electrodes and one or more electrodes vertically spaced apart from the plurality of laterally spaced electrodes, the improvement comprising:

a) providing a donor having transferable organic material in spaced relationship with the laterally spaced electrodes; and

b) illuminating the donor with radiation in patterns corresponding to the area of the laterally spaced electrodes to transfer organic material over the laterally spaced electrodes such that substantially all of the organic material is transferred and the edge taper region of the organic material is less than 8 microns thereby permitting the reduction in spacing between the laterally spaced electrodes and improvement in the aperture ratio, the resolution, or both, of the OLED device.

2. In a method of improving the aperture ratio or resolution of an OLED device which includes a plurality of laterally spaced electrodes and one or more electrodes vertically spaced apart from the plurality of laterally spaced electrodes, the improvement comprising:

a) providing a donor having transferable organic material in spaced relationship with the laterally spaced electrodes; and

b) illuminating the donor with radiation in patterns corresponding to the area of the laterally spaced electrodes to transfer organic material over the laterally spaced electrodes such that substantially all of the organic material is transferred and the edge taper region of the organic material is less than 8 microns and the corner radii of the organic material are less than 6 microns thereby permitting the reduction in spacing between the laterally spaced electrodes and improve the aperture ratio or resolution of the OLED device.

3. The method of claim 2 further including the step of providing one or more different donors having different organic materials and repeating elements a) and b).

4. In a method of improving the aperture ratio or resolution of an OLED device which includes a plurality of laterally spaced electrodes and one or more electrodes vertically spaced apart from the plurality of laterally spaced electrodes, the improvement comprising:

a) providing a donor having transferable organic material in spaced relationship less than 10 microns from the laterally spaced electrodes, the organic material having a high-contrast response; and

b) illuminating the donor with radiation in patterns corresponding to the area of the laterally spaced electrodes to transfer organic material over the laterally spaced electrodes such that substantially all of the organic material is transferred and the edge taper region of the organic material is less than 8 microns and the corner radii of the organic material are less than 6 microns thereby permitting the reduction in spacing between the laterally spaced electrodes and improve the aperture ratio or resolution of the OLED device.

5. The method of claim 4 further including the step of providing one or more different donor elements having different organic materials and repeating elements a) and b).

6. The method of claim 1 wherein the OLED device is an active matrix device and the laterally spaced electrodes each corresponds to a pixel and there is a single vertically spaced apart electrode from the laterally spaced electrodes.

7. An OLED device with improved aperture ratio or resolution which includes a plurality of laterally spaced electrodes and one or more

electrodes vertically spaced apart from the plurality of laterally spaced electrodes, comprising:

a) one or more organic layers formed between the laterally spaced electrodes and the one or more vertically spaced apart electrodes such that the organic material of each of the one or more organic layers has an edge taper region less than 8 microns thereby permitting the reduction in spacing between the laterally spaced electrodes and improvement in the aperture ratio or resolution of the OLED device.

8. The OLED device of claim 7 wherein the OLED device is an active matrix device and the laterally spaced electrodes each corresponds to a pixel and there is a single vertically spaced apart electrode from the laterally spaced electrodes.

9. An OLED device with improved aperture ratio or resolution which includes a plurality of laterally spaced electrodes and one or more electrodes vertically spaced apart from the plurality of laterally spaced electrodes, comprising:

a) one or more organic layers formed between the laterally spaced electrodes and the one or more vertically spaced apart electrodes such that the organic material of each of the one or more organic layers has an edge taper region less than 8 microns and corner radii less than 6 microns thereby permitting the reduction in spacing between the laterally spaced electrodes and improvement in the aperture ratio or resolution of the OLED device.

10. The OLED device of claim 9 wherein the OLED device is an active matrix device and the laterally spaced electrodes each corresponds to a pixel and there is a single vertically spaced apart electrode from the laterally spaced electrodes.